ACOUSTICAL ANALYSIS ASSOCIATES, INCORPORATED

AAAI Report 1252
AAAI Project 88018

QUARTERLY NOISE MONITORING AT BURBANK AIRPORT FOURTH QUARTER 2000

Jane M. Beckmann
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February 2001

Prepared for:

BURBANK GLENDALE PASADENA AIRPORT

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FOURTH QUARTER 2000

I. INTRODUCTION

In compliance with the California Noise Standards (Reference 1) and the current variance from certain provisions of the Standards (Reference 2), the operator of the Burbank Airport is required to perform noise monitoring in the vicinity of the airport for the purpose of establishing a noise impact boundary. The Noise Standards currently specify a community noise equivalent level (CNEL) of 65 dB for the noise impact boundary[1]. The airport is required to provide, each quarter, an updated annual noise impact contour based on measurement data over the four preceding quarters.

A permanent noise monitoring system became operational in April 1980 and, with brief interruption for system expansion, maintenance, and program changes, has been operational since that time. The original noise monitor sites have remained unchanged (with the exception of Site 8 that was moved about 15 feet because of construction). Two sites were added east of the airport in late 1980. Four sites were added south of the airport in January 1986 in response to the requirement to determine the 65 dB contour. Three more locations were added in February 1997. Two of these, identified as 16 and 17, are south of the airport, and one, 18, is to the west. The site to the west replaces Site 8. These locations were added to permit monitoring closer to the 65 dB contour. The noise monitoring computer at the airport was replaced in August 1995.

This report describes the data acquired by the monitoring system during the fourth quarter of 2000. Noise impact boundaries for 65 dB and 70 dB are shown based on these measurements and measurements obtained during the first, second and third quarter of 2000 reported in References 3, 4 and 5. Figure 1 shows the 70 dB contour and Figure 2 shows the 65 dB contour, based on the measured noise data.

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[1] Prior to January 1, 1986, a CNEL of 70 dB defined the noise impact boundary.

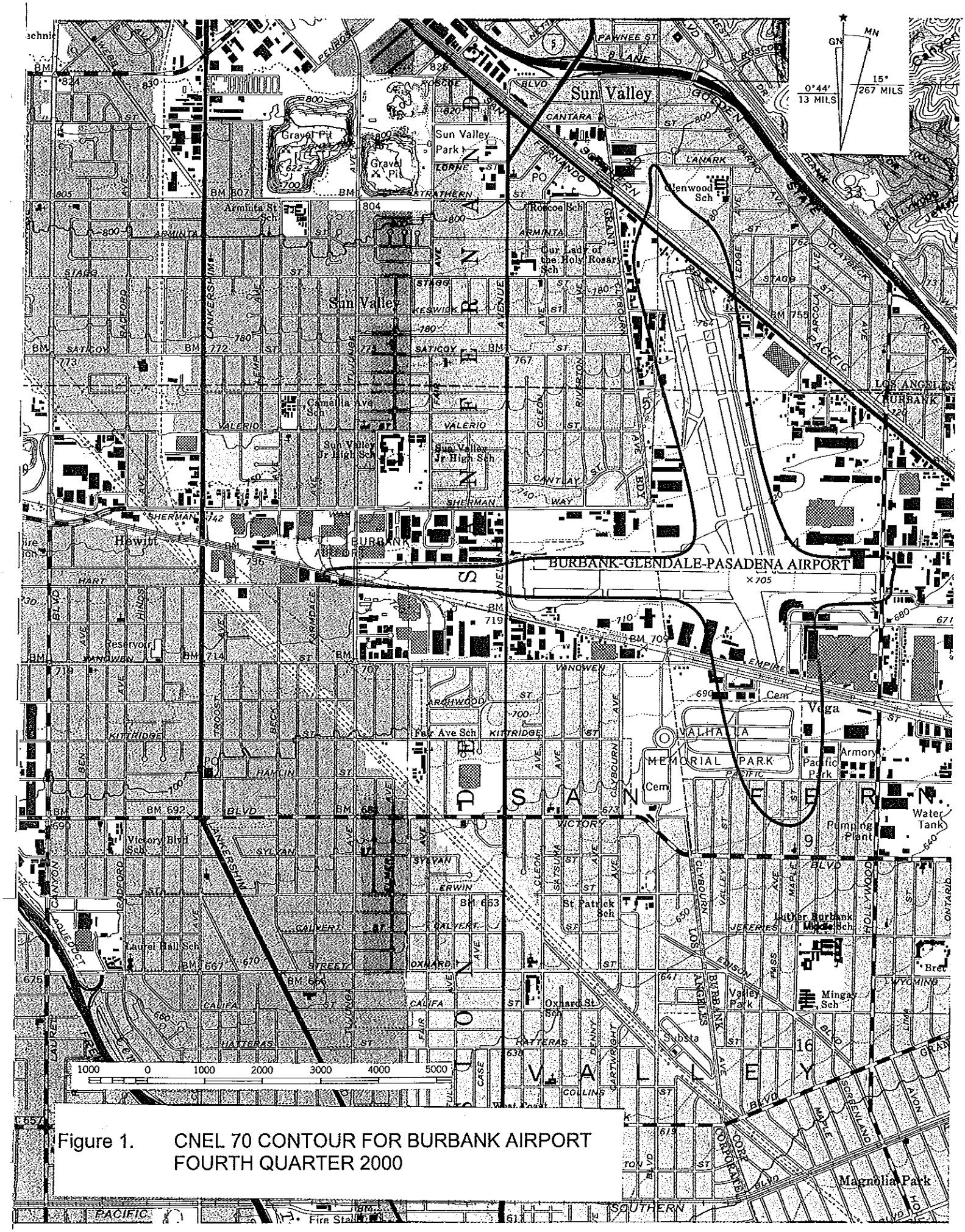

Figure 1. CNEL 70 CONTOUR FOR BURBANK AIRPORT
FOURTH QUARTER 2000

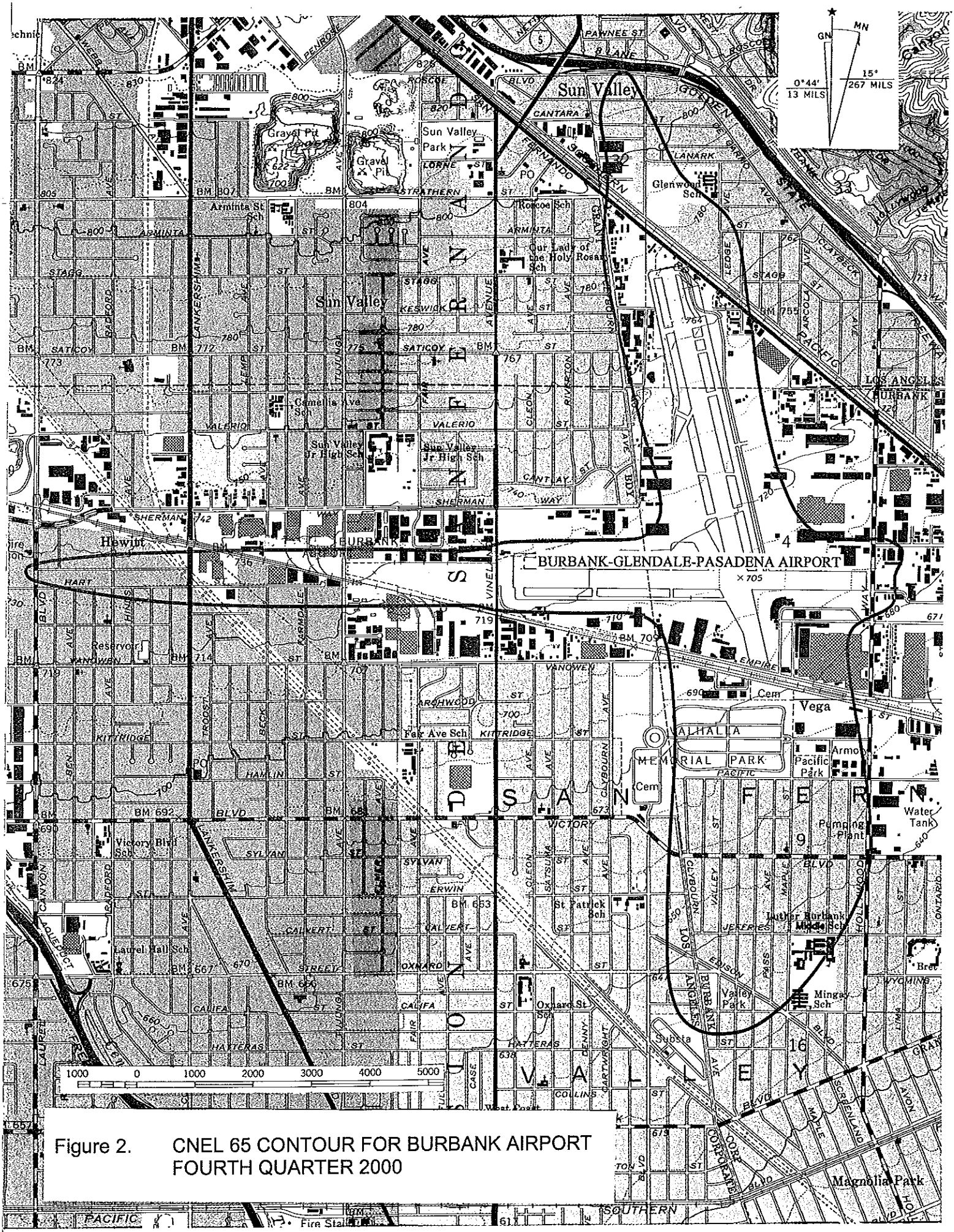

Figure 2. CNEL 65 CONTOUR FOR BURBANK AIRPORT
FOURTH QUARTER 2000

II. NOISE MEASUREMENTS

A. Sites

Aircraft noise levels were monitored at 15 locations prior to February, 1997. Two sites were added in February 1997, and equipment at one site west of the airport was moved to a new location. The noise monitor sites are shown in Figure 3. No data were recorded at Site 8 after Site 18 became active. The site is still shown on this figure.

B. Noise Measurement Equipment

Each of the microphone locations uses an identical set of equipment connected to a central control unit. The noise level at each site is digitized and transmitted by phone line to the central site. The computer at the central site processes the data to produce (among other measures) the CNEL at each site. Appendix A provides a brief description of the system.

C. Noise Data

Electrical power and phone line interruptions occurred several times during the quarter resulting in loss of data. Tables 1, 2, and 3 show each site monitoring RMS "OFF" if the site was operating for less than 94% of the time. The data for these days were excluded from the averages.

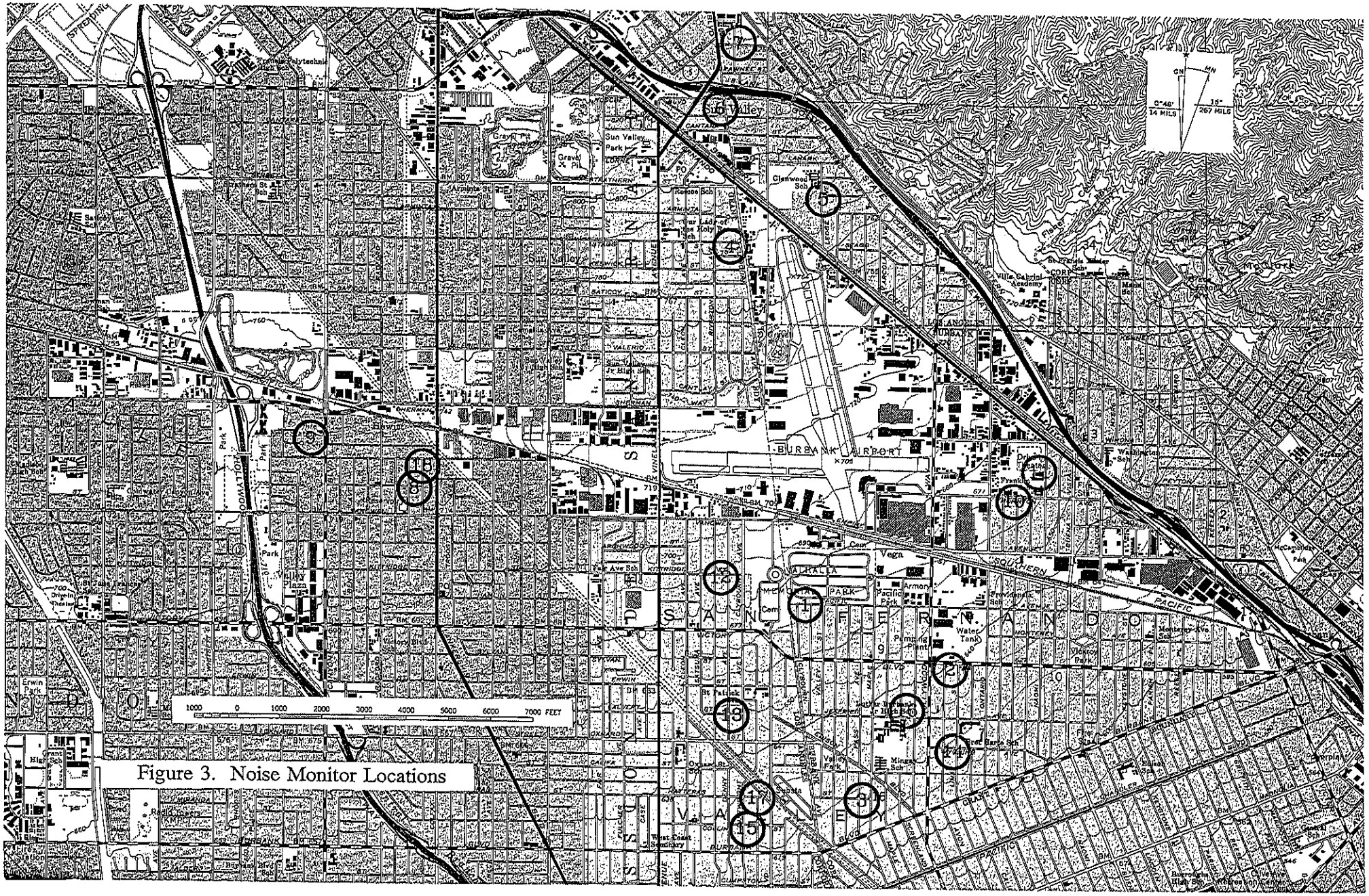

Figure 3. Noise Monitor Locations

D. Operational Data

Detailed departure and arrival logs are provided by the airlines. Operations of other jet aircraft are determined from air traffic strips provided by the FAA at Burbank Tower. In addition, flight schedules and logs of nighttime operations are provided by airport personnel.

III. MEASURED NOISE DATA

Daily CNEL values for the noise monitoring system are listed in Tables 1, 2, and 3. Table 4 lists the average values for each quarter together with the annual average.

IV. SCHEDULED AIRLINE AND COMMUTER OPERATIONS

The scheduled air carrier and commuter operations for the quarter are shown in Table 5.

V. CNEL CONTOUR DEVELOPMENT

The contours shown in Figures 1 and 2 are based upon computer-generated "master" contours which are adjusted to reflect the monitoring data. This third quarter 2000 used the master contours produced by Version 5.2A of the Integrated Noise Model (INM), a sophisticated aircraft noise modeling program developed for the Federal Aviation Administration. Inputs to the program consist of aircraft types and performance data, flight paths, numbers of operations, and day/evening/night distribution of flights. The program calculates CNEL values at equally spaced grid points and produces CNEL contour lines at 1 dB intervals. The annual average CNEL values at each site were marked at the appropriate locations on the contour map and the locations of the 65 and 70 dB CNEL contours were determined in the vicinity of each measuring point. These points were then joined following the general shape of the computed contours.

The master contours, used in developing the contours for this quarter are based on operations for the 12-month period from January 1998 through December 1998. This replaced the previous master set of CNEL Contours which were based on operations for the 12-month period from January 1995 through December 1995.

TABLE 1. CNEL VALUES FOR OCTOBER 2000

	RMS NUMBER																	
DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
10/01/00	67.4	62.6	64.2	63.6	60.6	59.2	61.9	OFF	65.0	53.3	54.1	54.0	60.8	OFF	63.3	65.8	62.8	66.1
10/02/00	67.7	62.9	62.9	62.4	60.6	61.1	61.4	OFF	64.2	56.1	58.2	54.4	61.6	60.2	63.3	65.3	63.0	65.5
10/03/00	69.0	63.9	64.0	64.4	64.8	64.7	63.8	OFF	66.2	59.9	55.0	57.4	63.3	63.3	64.2	67.5	63.7	67.5
10/04/00	67.5	63.4	64.3	63.1	67.1	63.7	58.2	OFF	65.8	56.3	55.5	56.7	62.1	60.5	64.3	66.1	63.8	67.0
10/05/00	68.6	63.8	64.4	62.6	64.1	64.0	61.3	OFF	66.5	59.3	60.6	55.0	62.7	61.4	64.5	66.6	63.7	67.2
10/06/00	68.2	65.2	65.7	62.2	64.0	62.3	57.5	OFF	66.8	55.7	55.0	57.0	62.7	62.3	65.0	68.1	64.6	68.3
10/07/00	66.2	61.3	62.5	56.7	61.6	57.9	59.4	OFF	62.0	54.9	52.3	52.3	59.9	59.8	62.0	65.0	61.9	63.3
10/08/00	66.9	62.2	63.0	59.6	61.4	62.5	59.5	OFF	64.2	52.4	46.2	55.4	61.1	59.6	63.7	64.5	63.0	65.5
10/09/00	67.9	62.3	62.5	58.7	61.3	57.3	53.6	OFF	66.0	53.8	53.1	55.5	62.6	59.1	63.3	65.5	63.1	66.9
10/10/00	66.3	61.8	63.3	65.0	65.6	66.1	60.1	OFF	63.5	60.3	60.4	55.3	61.6	61.3	62.4	66.7	62.1	65.4
10/11/00	68.7	64.3	64.4	65.7	67.1	64.8	58.6	OFF	66.3	63.0	59.9	56.6	64.1	62.6	65.7	66.5	65.7	66.6
10/12/00	67.8	63.9	64.1	64.4	65.3	64.4	62.9	OFF	66.3	62.4	63.0	57.3	62.1	61.6	64.9	65.6	64.0	68.8
10/13/00	69.2	64.3	65.0	64.7	65.2	65.1	64.5	OFF	64.4	62.2	60.8	57.4	62.9	62.2	65.9	66.7	65.5	OFF
10/14/00	69.0	63.2	65.0	68.9	63.9	62.6	60.4	OFF	60.4	58.1	58.4	56.8	65.6	60.4	64.6	69.3	64.7	OFF
10/15/00	71.4	68.9	64.4	64.7	64.1	60.8	61.6	OFF	69.3	53.1	52.1	58.5	62.0	69.2	67.1	66.0	65.6	68.8
10/16/00	67.0	62.2	63.0	62.5	62.7	63.1	66.0	OFF	62.1	58.4	59.0	55.0	60.8	60.3	63.0	65.0	62.8	64.1
10/17/00	68.5	63.0	63.5	64.4	63.7	63.5	61.8	OFF	64.9	59.1	59.5	57.8	62.5	61.7	64.1	65.6	63.5	66.5
10/18/00	68.4	62.9	64.2	62.9	61.8	60.0	56.2	OFF	65.9	61.5	61.2	56.7	63.7	60.1	64.4	67.2	67.9	66.9
10/19/00	68.1	63.2	64.2	63.7	61.0	59.1	54.9	OFF	66.4	55.8	58.2	55.1	61.4	60.2	64.7	65.4	64.1	68.1
10/20/00	68.4	63.2	64.4	64.7	62.0	61.0	56.8	OFF	67.4	59.6	57.5	55.1	62.0	60.4	64.2	65.5	63.9	68.5
10/21/00	67.1	61.6	62.0	60.4	63.7	60.3	60.9	OFF	62.4	59.9	51.9	56.7	61.5	59.0	62.9	63.8	62.9	63.1
10/22/00	65.9	62.1	63.6	63.9	59.6	62.7	59.2	OFF	64.7	55.6	51.7	54.4	58.2	60.2	62.7	65.0	61.9	66.1
10/23/00	68.1	61.3	62.0	64.1	65.1	62.4	65.3	OFF	62.8	59.3	59.7	55.3	62.0	60.0	62.7	64.0	62.2	64.3
10/24/00	70.4	63.8	63.5	64.9	66.0	68.6	67.8	OFF	63.5	58.0	59.5	59.8	64.0	61.7	64.7	66.1	64.4	65.7
10/25/00	67.7	62.5	62.6	64.2	65.7	66.5	65.2	OFF	65.8	64.9	64.8	57.2	62.4	60.4	63.5	64.6	63.1	71.4
10/26/00	68.6	63.7	64.6	63.8	65.3	59.6	58.5	OFF	66.4	62.0	60.7	OFF	63.3	61.7	64.9	66.4	64.2	68.3
10/27/00	69.1	65.2	65.7	63.6	63.1	62.1	58.5	OFF	66.6	65.0	59.0	OFF	62.7	62.7	65.2	67.4	64.7	67.8
10/28/00	66.6	62.1	62.3	62.3	62.6	59.9	64.8	OFF	63.8	53.2	54.2	OFF	60.5	59.8	63.3	64.0	62.8	OFF
10/29/00	69.9	64.4	64.2	66.8	66.0	59.0	54.9	OFF	66.1	52.2	46.5	OFF	64.3	61.8	65.5	66.0	65.1	OFF
10/30/00	67.7	63.8	65.9	61.7	61.2	60.4	58.9	OFF	63.7	61.3	57.6	OFF	61.3	62.1	64.5	67.8	63.7	OFF
10/31/00	69.2	63.8	64.0	67.3	65.2	64.2	62.8	OFF	66.0	58.0	62.2	59.7	63.3	61.2	64.9	66.0	64.3	64.5
AVERAGE	68.4	63.7	64.0	64.2	64.2	63.4	62.1	0.0	65.4	59.6	58.8	56.8	62.6	61.9	64.4	66.2	64.1	67.1
NO./DAYS	31	31	31	31	31	31	31	0	31	31	31	26	31	30	31	31	31	26

TABLE 2. CNEL VALUES FOR NOVEMBER 2000

	RMS NUMBER																	
DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11/01/00	68.3	63.3	63.5	65.1	65.9	64.6	63.8	OFF	63.7	57.5	58.6	60.1	63.3	60.3	64.0	65.3	63.6	64.9
11/02/00	69.4	64.7	65.6	64.2	64.8	64.5	61.1	OFF	64.1	60.7	60.5	59.1	62.5	62.2	64.9	68.1	63.7	65.4
11/03/00	65.8	61.2	62.2	64.9	63.5	67.5	61.5	OFF	64.3	58.7	57.1	56.5	57.2	59.4	61.4	63.8	60.8	65.4
11/04/00	72.4	62.5	59.9	63.1	66.1	64.1	69.8	OFF	60.2	57.8	58.4	60.8	65.7	58.8	59.2	63.8	59.4	61.6
11/05/00	70.7	67.3	67.7	62.6	62.6	54.8	52.9	OFF	65.9	57.7	56.1	58.8	63.2	67.1	65.0	66.5	64.9	66.5
11/06/00	67.8	62.5	63.5	65.8	67.6	66.0	60.7	OFF	65.1	57.4	55.8	56.7	61.0	60.3	63.5	65.6	63.0	66.4
11/07/00	64.4	58.3	59.2	65.1	65.7	66.6	63.4	OFF	61.9	58.7	57.5	54.7	57.5	57.3	58.0	62.2	57.8	63.8
11/08/00	69.8	63.5	63.3	65.7	64.8	63.0	62.2	OFF	64.6	61.4	57.8	61.0	63.2	62.1	63.9	65.8	63.4	65.2
11/09/00	69.4	63.0	63.2	65.9	63.9	57.6	60.7	OFF	65.4	57.2	55.3	57.4	65.3	59.8	65.6	65.0	65.3	67.0
11/10/00	68.6	63.6	63.7	63.5	66.5	66.4	61.9	OFF	65.7	61.0	60.9	61.4	62.1	61.1	63.4	66.1	62.6	67.0
11/11/00	65.8	60.9	61.5	62.0	62.9	57.5	58.5	OFF	61.1	55.0	55.0	55.5	60.2	58.3	61.7	63.3	61.4	62.6
11/12/00	66.3	62.2	63.2	58.8	61.6	57.5	61.0	OFF	63.2	51.5	47.2	53.0	61.2	59.9	63.0	65.2	62.3	64.3
11/13/00	67.2	63.0	62.6	60.8	63.3	59.3	58.9	OFF	62.9	57.3	58.0	56.8	61.7	60.0	64.1	64.6	63.6	64.2
11/14/00	66.1	60.3	61.8	66.0	67.3	67.7	64.0	OFF	61.5	60.0	OFF	56.9	61.2	58.8	61.7	66.1	61.6	63.9
11/15/00	70.3	62.5	62.4	65.4	65.8	68.0	64.4	OFF	64.4	59.5	59.7	64.1	64.8	59.7	63.5	63.7	62.8	64.3
11/16/00	69.6	64.6	64.4	68.9	68.7	65.8	63.5	OFF	64.9	62.1	62.2	59.0	64.0	63.0	65.1	66.7	64.3	65.7
11/17/00	66.7	59.9	59.4	66.4	68.7	68.8	64.0	OFF	64.8	60.2	60.2	59.2	56.9	56.7	59.7	61.9	58.5	65.4
11/18/00	62.8	60.6	58.7	58.0	60.7	51.6	55.5	OFF	59.8	53.8	55.0	52.7	57.6	55.3	59.8	60.6	58.9	61.1
11/19/00	64.6	59.5	59.8	57.6	61.4	56.9	59.7	OFF	61.7	50.8	49.5	50.5	59.5	55.9	61.7	61.3	60.9	63.7
11/20/00	65.4	61.3	61.1	59.6	61.1	61.1	57.4	OFF	61.3	59.0	59.0	54.5	58.9	57.9	61.3	63.2	60.6	63.2
11/21/00	68.5	63.5	63.7	64.4	66.4	63.9	62.9	OFF	64.7	61.6	61.5	56.7	61.4	60.7	64.2	65.3	63.6	66.2
11/22/00	68.9	63.0	63.8	65.9	67.1	68.4	64.5	OFF	65.2	65.4	57.3	57.5	61.2	61.1	63.3	67.5	62.7	66.9
11/23/00	64.8	61.4	61.8	65.7	64.2	56.6	58.1	OFF	58.7	55.0	57.6	54.1	58.9	59.5	61.6	63.3	60.8	60.1
11/24/00	64.7	60.6	61.0	62.1	61.8	59.0	58.3	OFF	62.0	57.8	56.8	53.7	59.2	57.9	61.7	62.6	61.2	63.2
11/25/00	64.7	OFF	61.2	59.3	59.9	55.7	59.2	OFF	60.8	52.9	52.0	55.3	58.6	57.5	61.1	62.5	60.6	62.1
11/26/00	67.2	64.3	64.2	65.0	66.6	56.4	58.0	OFF	63.6	53.8	50.2	54.7	61.1	61.4	63.8	66.1	63.4	64.8
11/27/00	67.7	64.0	64.5	68.7	66.7	60.0	57.8	OFF	65.1	59.5	58.4	58.3	61.3	61.6	64.1	66.7	63.0	67.0
11/28/00	70.4	65.1	65.9	68.7	65.6	61.0	59.3	OFF	65.2	61.9	62.0	60.2	64.2	62.8	64.9	67.5	64.7	66.6
11/29/00	69.4	64.0	64.2	63.4	65.3	66.5	61.8	OFF	63.9	62.0	61.5	58.5	62.5	61.3	64.0	66.2	63.5	64.9
11/30/00	68.7	64.6	65.4	65.5	65.8	63.1	60.6	OFF	64.8	62.5	62.7	59.2	62.5	61.8	65.6	67.7	64.8	65.7
AVERAGE	68.1	63.0	63.3	64.8	65.3	64.1	62.1	0.0	63.7	59.5	58.6	58.2	61.9	60.7	63.2	65.2	62.7	65.0
NO./DAYS	30	29	30	30	30	30	30	0	30	30	29	30	30	30	30	30	30	30

TABLE 3. CNEL VALUES FOR DECEMBER 2000

	RMS NUMBER																	
DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
12/01/00	68.1	63.4	64.1	65.7	63.7	62.4	60.3	OFF	64.7	57.1	57.8	56.9	61.3	60.7	64.4	65.7	63.6	66.0
12/02/00	64.8	60.8	60.1	62.2	61.1	60.6	55.9	OFF	62.0	56.2	55.2	54.6	59.0	57.0	61.2	62.1	60.8	63.0
12/03/00	66.2	61.5	62.5	64.7	62.2	59.9	61.6	OFF	63.9	53.4	48.4	51.3	59.9	58.9	63.0	OFF	62.4	65.0
12/04/00	68.8	64.5	63.5	63.9	65.6	63.9	61.5	OFF	62.4	60.0	58.3	60.2	61.8	60.7	64.1	65.9	63.8	64.1
12/05/00	68.0	62.1	62.8	63.8	63.3	64.3	61.4	OFF	62.7	59.2	61.0	60.4	60.8	60.3	62.2	64.4	62.0	64.3
12/06/00	68.0	62.5	63.0	61.8	65.4	61.9	60.5	OFF	63.4	58.5	59.1	59.2	62.5	60.6	63.9	65.1	63.3	64.8
12/07/00	68.7	64.4	65.4	62.8	65.2	65.8	65.6	OFF	64.0	60.1	61.8	59.6	62.2	62.2	64.6	67.4	64.0	64.7
12/08/00	70.0	63.9	63.6	64.8	64.3	62.1	57.7	OFF	66.3	54.2	57.9	57.2	63.4	61.1	64.7	65.5	64.0	66.7
12/09/00	67.0	61.1	62.1	57.8	60.7	54.4	45.7	OFF	62.1	52.3	53.3	53.4	61.6	58.4	62.6	63.4	62.3	63.5
12/10/00	67.3	62.8	63.1	57.6	60.9	54.3	52.7	OFF	65.3	52.8	49.5	54.4	62.3	59.9	64.0	65.0	63.7	66.6
12/11/00	69.6	63.0	63.4	65.9	64.0	67.6	61.6	OFF	65.1	58.6	58.5	59.3	63.5	60.4	64.5	64.9	63.9	66.7
12/12/00	65.9	61.0	62.7	66.3	64.4	66.6	61.2	OFF	62.9	60.7	57.1	58.4	59.0	59.9	60.6	66.5	60.2	65.1
12/13/00	69.1	64.9	65.4	67.4	66.3	64.5	67.6	OFF	63.5	63.2	60.5	59.1	64.6	61.8	67.1	67.3	66.6	64.7
12/14/00	68.3	64.5	65.4	63.7	63.7	64.8	65.7	OFF	63.2	61.4	58.9	57.3	62.5	62.1	65.5	66.8	65.0	63.8
12/15/00	69.2	64.9	65.7	67.5	66.1	65.9	66.1	OFF	61.1	60.0	57.6	57.8	62.3	62.8	65.7	68.6	65.3	62.9
12/16/00	65.6	59.9	61.5	63.3	63.9	60.1	60.3	OFF	58.7	53.6	51.9	52.5	59.2	57.0	60.8	63.3	60.3	60.4
12/17/00	65.1	59.3	60.1	62.5	61.4	60.0	59.4	OFF	61.9	57.8	54.4	54.9	58.6	56.7	61.2	61.9	60.8	63.7
12/18/00	63.9	59.1	59.2	62.8	63.9	57.4	57.0	OFF	60.8	55.9	56.0	51.5	57.7	55.2	60.7	61.4	60.2	62.7
12/19/00	65.6	61.2	61.9	71.0	71.0	60.5	61.5	OFF	61.1	59.4	58.3	55.2	58.1	58.1	60.7	64.0	59.8	62.9
12/20/00	68.0	63.4	64.5	69.9	69.4	62.8	60.7	OFF	64.4	61.4	58.3	58.6	59.5	60.9	63.2	66.9	62.3	65.0
12/21/00	70.5	65.7	66.9	70.5	69.4	63.3	62.7	OFF	63.4	61.2	59.9	58.1	63.6	63.2	65.8	68.8	65.2	65.0
12/22/00	72.0	65.7	66.4	71.3	71.1	65.8	63.1	OFF	67.0	62.6	62.9	61.8	65.4	62.7	67.4	68.1	67.2	67.6
12/23/00	66.7	62.6	63.5	63.5	64.3	62.1	58.5	OFF	63.2	57.8	58.9	58.2	59.9	60.4	63.8	65.7	63.3	64.9
12/24/00	67.4	63.0	64.1	66.3	69.8	60.5	59.1	OFF	62.5	50.5	50.2	55.5	62.7	60.8	63.6	66.2	63.7	63.8
12/25/00	64.5	55.4	58.0	64.0	62.0	64.6	59.9	OFF	59.5	49.0	41.2	51.7	51.4	53.2	54.0	59.4	53.4	60.9
12/26/00	66.0	62.6	63.5	67.0	66.7	55.5	56.8	OFF	62.6	59.5	56.7	53.4	59.8	59.9	63.1	65.5	62.4	64.0
12/27/00	66.4	61.2	63.5	69.3	65.7	63.3	59.1	OFF	63.8	57.6	59.0	56.3	60.9	59.3	63.7	64.9	63.4	64.7
12/28/00	66.8	61.4	62.1	65.7	66.2	56.5	58.0	OFF	63.4	62.1	59.6	57.3	60.2	58.1	62.1	64.3	61.4	65.3
12/29/00	66.4	61.1	61.2	67.4	70.4	66.5	64.6	OFF	63.6	63.7	60.8	56.7	60.9	58.1	62.6	63.5	63.1	66.6
12/30/00	70.5	60.8	61.5	67.2	65.7	63.5	58.7	OFF	63.0	55.9	55.8	60.2	63.8	58.2	63.5	63.4	63.8	64.2
12/31/00	67.1	62.0	63.1	66.5	69.2	60.0	56.5	OFF	60.9	52.7	53.1	54.8	61.4	58.9	63.3	64.0	62.9	62.9
AVERAGE	67.9	62.7	63.5	66.4	66.5	63.2	61.6	0.0	63.3	59.1	58.1	57.5	61.6	60.1	63.7	65.3	63.3	64.7
NO./DAYS	31	31	31	31	31	31	31	0	31	31	31	31	31	31	31	31	31	31
QTR. AVG.	68.2	63.2	63.6	65.3	65.4	63.6	61.9	0.0	64.3	59.4	58.5	57.6	62.0	60.9	63.8	65.6	63.4	65.6
NO./DAYS	92	91	92	92	92	92	92	0	92	92	91	87	92	91	92	92	92	87

TABLE 4. AVERAGE CNEL VALUES

Site No.	1st Quarter 2000	2nd Quarter 2000	3rd Quarter 2000	4th Quarter 2000	4-Quarter Average
1	67.7	67.7*	67.5	68.2	67.8
2	62.9	62.9	63.1	63.2	63.0
3	63.2	63.4	63.2	63.6	63.4
4	64.0	62.3	61.9	65.3	63.6
5	65.0	63.3	63.1	65.4	64.3
6	63.2	62.3	62.6	63.6	63.0
7	61.3	61.9	62.6	61.9	61.9
8	0.0	0.0	0.0	0.0	----
9	64.9	65.1	64.5	64.3	64.7
10	58.9	58.5	59.8	59.4	59.2
11	57.1	56.3*	57.0	58.5	57.3
12	57.4	57.2	54.8	57.6	56.9
13	62.0	61.9	61.6	62.0	61.9
14	59.8	60.0	60.1	60.9	60.2
15	63.5	63.6	63.3	63.8	63.6
16	65.1	65.1	64.9	65.6	65.2
17	63.3	63.5	63.2	63.4	63.4
18	65.9	66.1	65.6	65.6	65.8

* These CNEL values are corrected from the raw measurements. By mistake, Tables 1, 2 and 3 in AAAI Report 1250 listed the raw CNEL data for RMS 1 and RMS 11. These raw CNEL data contained extraneous non-aircraft noise events.

TABLE 5. WEEKLY SCHEDULED AIR CARRIER AND COMMUTER FLIGHTS FOR THE FOURTH QUARTER 2000

SCHEDULE IN EFFECT FROM 10/01/00 - 10/28/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	14	7	19	19	191	176
EVENING	0	7	0	7	0	0	48	49
NIGHT	0	0	0	0	7	7	0	14
TOTAL	14	14	14	14	26	26	239	239

SCHEDULE IN EFFECT FROM 10/01/00 - 10/28/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	83	76	7	7	41	39	40	40
EVENING	12	19	7	7	13	21	0	0
NIGHT	0	0	0	0	6	0	0	0
TOTAL	95	95	14	14	60	60	40	40

SCHEDULE IN EFFECT FROM 10/01/00 - 10/28/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727DE	FE ARRI 727DE
DAY	8	7	0	0	21	21	4	0
EVENING	0	1	6	6	6	6	0	0
NIGHT	0	0	0	0	0	0	0	4
TOTAL	8	8	6	6	27	27	4	4

SCHEDULE IN EFFECT FROM 10/01/00 - 10/28/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727100	FE ARRI B727100	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	0	0	0	5	442	409
EVENING	5	0	0	0	5	0	102	123
NIGHT	0	0	0	0	0	0	13	25
TOTAL	5	5	0	0	5	5	557	557

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 10/29/00 - 10/29/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 10/29/00 - 10/29/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	41	39	40	40
EVENING	20	25	6	6	13	21	0	0
NIGHT	0	0	0	0	6	0	0	0
TOTAL	94	94	13	13	60	60	40	40

SCHEDULE IN EFFECT FROM 10/29/00 - 10/29/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727DE	FE ARRI 727DE
DAY	8	7	0	0	6	6	4	0
EVENING	0	1	6	6	6	6	0	0
NIGHT	0	0	0	0	0	0	0	4
TOTAL	8	8	6	6	12	12	4	4

SCHEDULE IN EFFECT FROM 10/29/00 - 10/29/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727100	FE ARRI B727100	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	0	0	0	5	430	413
EVENING	5	0	0	0	5	0	112	112
NIGHT	0	0	0	0	0	0	13	30
TOTAL	5	5	0	0	5	5	555	555

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 10/30/00 - 10/30/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 10/30/00 - 10/30/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	41	39	40	40
EVENING	20	25	6	6	13	21	0	0
NIGHT	0	0	0	0	6	0	0	0
TOTAL	94	94	13	13	60	60	40	40

SCHEDULE IN EFFECT FROM 10/30/00 - 10/30/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727HK	FE ARRI 727HK
DAY	8	7	0	0	6	6	0	4
EVENING	0	1	6	6	6	6	4	0
NIGHT	0	0	0	0	0	0	0	0
TOTAL	8	8	6	6	12	12	4	4

SCHEDULE IN EFFECT FROM 10/30/00 - 10/30/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727Q	FE ARRI B727Q	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	4	0	0	5	430	417
EVENING	5	0	0	0	5	0	116	112
NIGHT	0	0	0	4	0	0	13	30
TOTAL	5	5	4	4	5	5	559	559

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 10/31/00 - 11/09/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 10/31/00 - 11/09/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	55	41	27	27
EVENING	20	25	6	6	0	14	6	6
NIGHT	0	0	0	0	6	6	0	0
TOTAL	94	94	13	13	61	61	33	33

SCHEDULE IN EFFECT FROM 10/31/00 - 11/09/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727HK	FE ARRI 727HK
DAY	8	7	0	0	6	6	0	4
EVENING	0	1	6	6	6	6	4	0
NIGHT	0	0	0	0	0	0	0	0
TOTAL	8	8	6	6	12	12	4	4

SCHEDULE IN EFFECT FROM 10/31/00 - 11/09/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727Q	FE ARRI B727Q	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	4	0	0	5	431	406
EVENING	5	0	0	0	5	0	109	111
NIGHT	0	0	0	4	0	0	13	36
TOTAL	5	5	4	4	5	5	553	553

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 11/10/00 - 11/26/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 11/10/00 - 11/26/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	55	41	27	27
EVENING	20	25	6	6	0	14	6	6
NIGHT	0	0	0	0	6	6	0	0
TOTAL	94	94	13	13	61	61	33	33

SCHEDULE IN EFFECT FROM 11/10/00 - 11/26/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727HK	FE ARRI 727HK
DAY	8	7	0	0	6	6	0	0
EVENING	0	1	6	6	6	6	0	0
NIGHT	0	0	0	0	0	0	0	0
TOTAL	8	8	6	6	12	12	0	0

SCHEDULE IN EFFECT FROM 11/10/00 - 11/26/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727Q	FE ARRI B727Q	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	4	0	0	5	431	402
EVENING	5	0	0	0	5	0	105	111
NIGHT	0	0	0	4	0	0	13	36
TOTAL	5	5	4	4	5	5	549	549

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 11/27/00 - 12/14/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 11/27/00 - 12/14/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	55	41	27	27
EVENING	20	25	6	6	0	14	6	6
NIGHT	0	0	0	0	6	6	0	0
TOTAL	94	94	13	13	61	61	33	33

SCHEDULE IN EFFECT FROM 11/27/00 - 12/14/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	FE DEPA 727HK	FE ARRI 727HK
DAY	8	7	0	0	6	6	0	0
EVENING	0	1	6	6	6	6	0	0
NIGHT	0	0	0	0	0	0	0	0
TOTAL	8	8	6	6	12	12	0	0

SCHEDULE IN EFFECT FROM 11/27/00 - 12/14/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727Q	FE ARRI B727Q	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	0	0	0	5	427	402
EVENING	5	0	5	0	5	0	110	111
NIGHT	0	0	0	5	0	0	13	37
TOTAL	5	5	5	5	5	5	550	550

TABLE 5. (CONTINUED)

SCHEDULE IN EFFECT FROM 12/15/00 - 12/31/00

	AA DEPA MD80	AA ARRI MD80	AS DEPA MD80	AS ARRI MD80	HP DEPA B7373	HP ARRI B7373	WN DEPA B7373	WN ARRI B7373
DAY	14	7	28	21	19	19	189	188
EVENING	0	7	0	7	0	0	51	33
NIGHT	0	0	0	0	7	7	0	19
TOTAL	14	14	28	28	26	26	240	240

SCHEDULE IN EFFECT FROM 12/15/00 - 12/31/00

	WN DEPA B7375	WN ARRI B7375	WN DEPA B7377	WN ARRI B7377	UA DEPA B7373	UA ARRI B7373	UA DEPA B7375	UA ARRI B7375
DAY	74	69	7	7	48	41	27	27
EVENING	20	25	6	6	0	7	6	6
NIGHT	0	0	0	0	6	6	0	0
TOTAL	94	94	13	13	54	54	33	33

SCHEDULE IN EFFECT FROM 12/15/00 - 12/31/00

	HP DEPA A320	HP ARRI A320	HP DEPA A319	HP ARRI A319	AS DEPA B7374	AS ARRI B7374	UA DEPA B727Q	UA ARRI B727Q
DAY	8	7	0	0	6	6	7	0
EVENING	0	1	6	6	6	6	0	7
NIGHT	0	0	0	0	0	0	0	0
TOTAL	8	8	6	6	12	12	7	7

SCHEDULE IN EFFECT FROM 12/15/00 - 12/31/00

	UPS DEPA B757	UPS ARRI B757	FE DEPA B727Q	FE ARRI B727Q	FE DEPA A300	FE ARRI A300	TOTAL DEPA	TOTAL ARRI
DAY	0	5	0	0	0	5	427	402
EVENING	5	0	4	0	5	0	109	111
NIGHT	0	0	0	4	0	0	13	36
TOTAL	5	5	4	4	5	5	549	549

TABLE 5. (CONTINUED)

FOURTH QUARTER 2000

PERIOD TOTALS FOR
AIR CARRIERS AND COMMUTERS

AIR CARRIERS

	DEP	ARR
DAY	5688	5321
EVE	1399	1507
NIGHT	171	430
TOTAL	7258	7258

COMMUTERS

	DEP	ARR
DAY	0	0
EVE	0	0
NIGHT	0	0
TOTAL	0	0

AIR CARRIERS AND COMMUTERS

	DEP	ARR
DAY	5688	5321
EVE	1399	1507
NIGHT	171	430
TOTAL	7258	7258

VI. INCOMPATIBLE LAND USE

The contours shown in Figures 1 and 2 were digitized and overlaid on a digital land use map of the area around the Airport. The total areas enclosed by the 65 and 70 dB CNEL contours were 1,196.2 and 490.0 acres, respectively. The areas of incompatible land uses enclosed by the contours were then computed[2]. The incompatible land use areas were 278.3 acres within the 65 dB contour and 14.3 acres within the 70 dB contour.

It should be noted that the above incompatible land areas do not include the soundproofed schools in the vicinity of the Airport (the Luther Burbank Middle School, St. Patrick and Glenwood Schools). The above incompatible land use areas also do not include those residences to which the Airport has acquired avigation easements. Within the 65 dB contour, the Airport has acquired avigation easements, through its ongoing sound insulation program, to 71 parcels of land. Those 71 parcels total 10.61 acres. Twenty four of the 71 parcels, totaling 3.64 acres, are also located within the 70 dB contour. Within the 65 dB contour, the Airport has also acquired avigation easements, under the Court of Appeal decision in Baker vs. Burbank-Glendale-Pasadena Airport Authority, 220 Cal.App.3d 1602 (1990), to an additional 58 parcels of land. Those parcels total 8.45 acres. Seven of those 58 parcels, totaling 1.01 acres, are located within the 70dB contour.

The estimated numbers of residences are 1,252 within the 65 dB contour, and 64 within the 70 dB contour. The estimated numbers of people residing within the 65 and 70 dB CNEL contours are 3,381 and 174 respectively.

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[2] AAAI maintains a digitized map of the existing land use around the Airport. This data base has been employed on a consistent basis in determining the land use and contour areas reported in the quarterly noise reports.

REFERENCES

1. California Department of Transportation, Division of Aeronautics, "Noise Standards", California Code of Regulations, Title 21, Chapter 2.5, Subchapter 6.

2. L-30488, Department of Transportation, State of California, 27 June 1984.

3. "Quarterly Noise Monitoring at Burbank Airport, First Quarter 2000", AAAI Report 1249.

4. "Quarterly Noise Monitoring at Burbank Airport, Second Quarter 2000", AAAI Report 1250.

5. "Quarterly Noise Monitoring at Burbank Airport, Third Quarter 2000", AAAI Report 1251.

APPENDIX A
NOISE MONITOR INSTRUMENTATION

APPENDIX A
NOISE MONITOR INSTRUMENTATION

The permanent noise monitor system, manufactured by Tracor, consists of 17 remote monitoring stations (RMS) connected to a central site by telephone lines. The system block diagram showing the major elements is shown in Figure A-1. The electrical signal generated by the microphone/preamplifier assembly at each site is processed in the RMS electronics. The signal is passed through an A-weighting filter and is then detected and converted to a digital level signal in decibels with a resolution of 0.1 dB.

The digitized sound level is transmitted every half second by telephone line to the central site. The data received by the central site are processed by the computer. According to preset parameters, the noise is separated into two categories--aircraft noise and community noise. Each event attributed to an aircraft is saved in a noise event file. Computations are made of hourly noise level, community noise equivalent level, runway use, and other parameters. A wide variety of data presentations is available by exercising a number of routines provided by Tracor, as well as special-purpose routines that can be generated by the user.

The locations of the remote sites (shown in Figure 3) are listed relative to the runway thresholds in Table A-1.

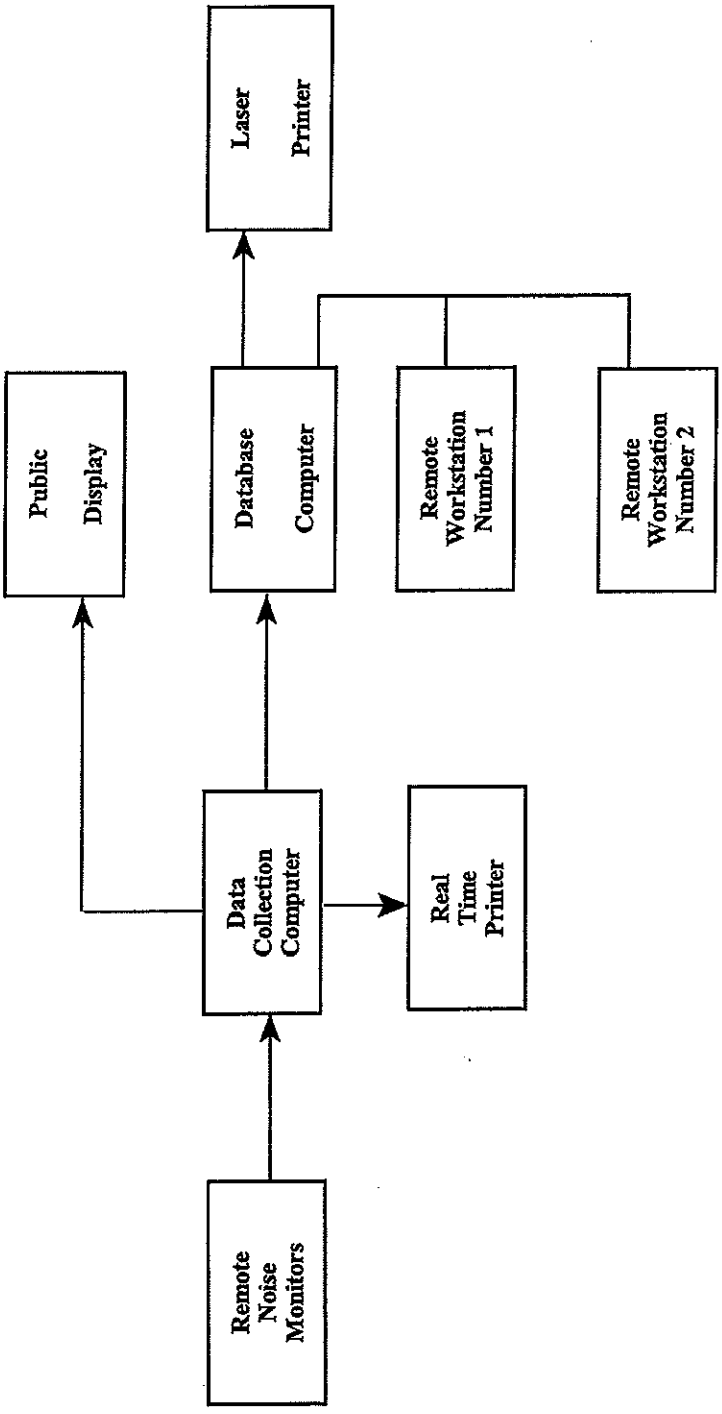

FIGURE A-1. PERMANENT NOISE MONITOR SYSTEM BLOCK DIAGRAM

TABLE A-1
NOISE MONITOR SITE LOCATIONS

Site No.	Distance From N. End of RW 15	Distance From Extended Centerline
1	8590	-1490
2	10830	1590
3	13440	-1090
4	-150	1200
5	-810	1100
6	-3280	-740
7	-4720	-50
12	7520	-3320
13	10660	-3600
14	12780	1160
15	13380	-3920
16	11600	360
17	12900	-3520

Note: Positive distances from the runway threshold are to the south; positive distances from the extended centerline are to the east.

Site No.	Distance From W. End of RW 8	Distance From Extended Centerline
8	-5900	-820
9	-8700	220
10	8180	-880
11	8740	-110
18	-5880	-440

Note: Positive distances from the runway threshold are to the east; positive distances from the extended centerline are to the north.

APPENDIX B
CALIBRATION

APPENDIX B
CALIBRATION

The system was calibrated during setup using a Bruel and Kjaer pistonphone. Acoustic calibrations are being performed approximately every six months. Electrical calibrations are performed automatically shortly after midnight each day. Figure B-1 shows the latest calibration certificate of the pistonphone employed in the acoustic calibrations and Figure B-2 shows a typical electrical calibration.

ACOUSTICAL ANALYSIS ASSOCIATES, INC.
22148 SHERMAN WAY, SUITE 206, CANOGA PARK, CA 91303
Phone: (818) 713-1160 – FAX: (818) 713-1360

CERTIFICATE OF CALIBRATION

ACOUSTIC CALIBRATOR – TYPE 4220

The calibration is performed by comparison with Pistonphone Type 4220, Serial No. 893686

Calibrated by: ODIN

Date: 11 SEP 2000

If the **Ambient Pressure Pa** deviates from the stated nominal value 1013 mbar, a correction SPL should be added to the calibrated Sound Pressure Level.

$$SPL = 20 \times \text{Log}_{10} \frac{P_a(\text{mbar})}{1013}$$

Calibrated by: R.P. Costello & O.A. Diaz

Date: 13 NOV 2000

Manufacturer: B&K
Serial No.: 757164

Sound Pressure Level produced in the coupler terminated by a loading volume at 1.333 cm^3 at 1013 mbar, 20°C, 65% R.H.
123.89 dB re. 20μPa

Frequency: 251.00 Hz ±0.5 Hz in "On" position.

Distortion: Less than 3%

Condition of Test:

Ambient Pressure: 990.30 mbar

Temperature: 22°C

Relative Humidity: 32%

R. Peter Costello
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Canoga Park, CA 91303
(818) 713-1160

NOTES:

INSTRUMENTATION USED FOR CALIBRATION

ITEM	TYPE	SERIAL NO.	CAL DATE	CAL BY	DUE DATE
MEASURING AMP	2606	586767	9 SEP 00	ODIN	9 SEP 01
B. F. OSCILLATOR	1022	466495	30 MAR 00	ODIN	30 MAR 01
SINE GENERATOR	1023	553662	21 SEP 00	ODIN	21 SEP 01
PISTONPHONE	4220	112143	18 MAR 00	ODIN	18 MAR 01
PISTONPHONE	4220	893686	11 SEP 00	ODIN	11 SEP 01
PISTONPHONE	4220	893859	19 APR 00	ODIN	19 APR 01
MICROPHONE *	4144	535815	10 SEP 00	ODIN	10 SEP 01

B&K ADAPTERS DB0111 AND DD0015 USED TO SIMULATE 640AA MICROPHONE.

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* Calibration Report *
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Calibration RMS: 1 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS: 2 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS: 3 Passed Peak:109.8 dB @ 04/21/2000 0:06
Calibration RMS: 4 Passed Peak:109.8 dB @ 04/21/2000 0:06
Calibration RMS: 5 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS: 6 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS: 7 Passed Peak:110.1 dB @ 04/21/2000 0:06
Calibration RMS: 9 Passed Peak:109.9 dB @ 04/21/2000 0:06
Calibration RMS:10 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS:11 Passed Peak:108.9 dB @ 04/21/2000 0:06
Calibration RMS:12 Passed Peak:110.1 dB @ 04/21/2000 0:06
Calibration RMS:13 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS:14 Passed Peak:110.0 dB @ 04/21/2000 0:06
Calibration RMS:15 Passed Peak:109.9 dB @ 04/21/2000 0:06
Calibration RMS:16 Passed Peak:110.1 dB @ 04/21/2000 0:06
Calibration RMS:17 Passed Peak:109.8 dB @ 04/21/2000 0:06
Calibration RMS:18 Passed Peak:110.0 dB @ 04/21/2000 0:06

Figure B-2. Typical Daily Electrical Calibration